

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Rishi Gupta on 4/2/2010.

The application has been amended as follows:

Amendments to the Claims:

1-2. (Canceled)

3. (Previously Presented) The method of claim 18, wherein generating the approval mark comprises:
generating a digital signature as the approval code; and
generating a signature image associated with the approval code.

4. (Previously Presented) The method of claim 18, wherein generating one or more second control codes comprises:
generating a single second control code for all of the text content.

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5–12. (Cancelled)

13. (Previously Presented) The computer program product of claim 25 27, wherein the instructions to generate the approval code cause the data processing equipment to:

- generate a digital signature as the approval code; and
- generate a signature image associated with the approval code.

14. (Previously Presented) The computer program product of claim 27, wherein the instructions to generate the one or more second control codes cause the data processing equipment to:

- generate a single second control code for all of the text content.

15. (Previously Presented) The computer program product of claim 27, wherein the print out has two or more physical pages, and the instructions to generate the one or more second control codes cause the data processing equipment to:

- generate one or more second control codes, each second control code corresponding to the text content on a page of the one or more physical pages.

16. (Previously Presented) computer program product of claim 27, wherein the instructions to generate the one or more control codes cause the data processing equipment to:

- encrypt the canonical form with a private key, the private key having an associated public key certificate for retrieving a public key associated with the private key.

17. (Canceled)

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18. (Currently Amended) A computer implemented method executed in a workflow system as part of a workflow within the workflow system, comprising:

generating an electronic document in a workflow system for use with an external entity that does not exchange electronic documents with the workflow system, the electronic document having text content, the electronic document further having a human-readable document appearance representing the text content;

attaching one or more approval codes to the electronic document, such that when the document is printed, each approval code generates [[an]] a unique approval mark;

converting the text content into a canonical form, wherein the text content is in an unambiguous reading order;

generating control codes for the electronic document as part of a workflow in the workflow system, the control codes including one or more first control codes that each correspond to a respective approval code, wherein the one or more first control codes authenticate the approval mark associated with the respective approval code, and one or more second control codes generated from the canonical form of the text content, wherein the one or more second control codes authenticate the text content and wherein the canonical form of the text is encrypted with a private key, the private key having an associated public key certificate for retrieving a public key associated with the private key; and

creating a print out of the electronic document, the print out having two or more physical pages and including: ~~a full-sized version of the human-readable document appearance representing the text content, the respective approval mark corresponding to each approval code, the one or more first control codes being usable to authenticate the one or more respective approval marks, and the one or more second control codes being usable to validate the text content of the print out;~~

a full-sized version of the human-readable document appearance representing the text content,

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the unique approval mark corresponding to each of the one or more approval codes,

the one or more first control codes being usable to authenticate one or more respective approval marks, and

the second control codes being usable to validate the text content of the print out, each second control code corresponding to the text content on a page of the two or more physical pages of the print out, each page of the print out having a unique second control code corresponding to the text content on the page;

sending the print out to the external entity;

receiving a modified print out at the workflow system back from the external entity, the modified print out comprising the print out sent to the external entity with a modification;

validating the modified print out within the workflow system using the one or more control codes;

integrating the validated and modified print out into the workflow;

and

continuing the workflow for the validated print out within the workflow system.

19. (Previously Presented) The computer implemented method of claim 18, wherein the modified print out comprises the print out sent to the external entity and a subsequently added human signature.

20. (Previously Presented) The computer implemented method of claim 18, wherein generating an electronic document in a workflow system comprises routing the electronic document to one or more workflow locations; and wherein attaching one or more approval codes to the electronic document comprises verifying the content of the electronic document at each of the one or more workflow locations.

21. (Previously Presented) The computer implemented method of claim 18, wherein the one or more approval codes authenticate the text content of the electronic document and identify one or more approvers associated with the approval codes.

22. (Previously Presented) The computer implemented method of claim 18, wherein the print out comprises a barcode representation of the one or more first control codes and the one or more second control codes.

23. (Currently Amended) A computer program product, tangibly embodied in a machine-readable storage device, comprising instructions operable to cause a programmable processor to:

receive a print out of an electronic document having text content generated in a workflow system, the print out being received in an external entity that does not exchange electronic documents with the workflow system, the print out having two or more physical pages and including: ~~a human-readable document appearance representing the text content, control codes and one or more approval codes, the control codes including one or more first control codes each generated for a respective approval code and one or more second control codes generated from a canonical form of the text content, the print out further representing a full-size version of the human-readable document appearance;~~

a full-size, human-readable document appearance representing the text content, the text content having an unambiguous reading order, and

control codes and one or more approval marks, the control codes including one or more first control codes each corresponding to a unique approval mark, the one or more first control codes generated from an approval code and being usable to authenticate the approval marks generated by the approval code, and two or more second control codes generated from a canonical form of the text content, each page of the two or more physical pages having a unique second control code;

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~~generate approval marks using the respective approval codes, the one or more first control codes generated for each approval code being usable to authenticate the approval marks generated by the approval code;~~

receive a public key from the workflow system, the public key used to verify the one or more second control codes;

receive a character map from the workflow system used by the workflow to generate the one or more second control codes;

convert the text content of the human-readable appearance of the print out to the canonical form of the text content using the character map received from the workflow system; and

access a portal of the workflow system to authenticate the approval marks and to validate the print out using the canonical form and the first and second control codes.

24. (Previously Presented) The computer program product of claim 23, wherein the print out comprises a barcode representation of the one or more first control codes and the one or more second control codes.

25–26. (Canceled)

27. (Currently Amended) A computer program product, tangibly embodied in a machine-readable storage device, comprising instructions operable to cause a processor to:

generate an electronic document in a workflow system as part of a workflow, the electronic document being for use with an external entity that does not exchange documents with the workflow system, the electronic document having text content, the electronic document further having a human-readable document appearance representing the text content;

attach one or more unique approval codes to the electronic document, such that when the document is printed, each approval code generates ~~[[an]]~~ a unique approval mark;

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convert the text content into a canonical form, wherein the text content is in an unambiguous reading order;

generate control codes for the electronic document as part of a workflow in the workflow system, the control codes including one or more first control codes that each correspond to a respective approval code, wherein the one or more first control codes authenticate the approval mark associated with the respective approval code, and one or more second control codes generated from the canonical form of the text content, wherein the one or more second control codes authenticate the text content and wherein the canonical form of the text is encrypted with a private key, the private key having an associated public key certificate for retrieving a public key associated with the private key; and

create a print out of the electronic document, the print out having two or more physical pages and including: ~~a full-sized version of the human-readable document appearance representing the text content, the respective approval mark corresponding to each approval code, the one or more first control codes being usable to authenticate the one or more respective approval marks, and the one or more second control codes being usable to validate the text content of the print out;~~

a full-sized version of the human-readable document appearance representing the text content,

the unique approval mark corresponding to each of the one or more approval codes,

the one or more first control codes usable to authenticate one or more respective approval marks, and

the second control codes usable to validate the text content of the print out, each second control code corresponding to the text content on a page of the two or more physical pages of the print out, each page of the print out having a unique second control code corresponding to the text content on the page;

send the print out to an external entity;

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receive the print out at the workflow system from the external entity, the print out comprising a human signature added subsequent to sending the print out to the external entity;

validate the print out comprising the human signature within the workflow system using the one or more control codes;

integrate the validated print out comprising the human signature into the workflow; and

continue the workflow for the validated print out within the workflow system.

28. (Previously Presented) The computer program product of claim 27, wherein the print out comprises a barcode representation of the one or more first control codes and the one or more second control codes.

Response to Arguments

6. Applicant's argument relative to prior art rejection in light of the amendments noted by this action, and the telephone interview conducted on 4/2/2010 have been found persuasive (please see the attached Interview Summary).

Allowable Subject Matter

7. Amended claims 3, 4, 13-16, 18-24, 27 and 28, now re-numbered as claims 1-15 are allowed.

Examiner's Statement of Reasons for Allowance

8. The following is an examiner's statement of reasons for allowance:

Independent claim 18 is directed to a method tied with a work flow system, which comprises a generating a printout of a document including physical pages. Independent claims 23 and 27 are directed to a product comprising a storage device. Therefore, all claims are directed to statutory subject matter.

All allowed claims include the features of amended independent claims 18, 23, and 27. None of the prior art of record, either taken by itself or in any combination, would have anticipated or made obvious the invention of the present application at or before the time it was filed.

Conclusion

9. Any comments considered necessary by the applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submission should be clearly labeled "comments on statement of reasons for allowance."

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Farid Homayounmehr whose telephone

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number is 571 272 3739. The examiner can normally be reached on 9 hrs Mon-Fri, off Monday biweekly.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on (571) 272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Farid Homayounmehr/
Examiner
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